

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DONALD C.D. CHANG, WAH L. LIM,
MING U. CHANG, and GRANT J. BEATSON

Appeal 2007-1267
Application 09/967,617¹
Technology Center 2600

Decided: September 11, 2007

Before: JEAN R. HOMERE, JAY P. LUCAS and
JOHN A. JEFFERY, *Administrative Patent Judges.*

LUCAS, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal from a Final Rejection of claims 1 to 8 and 10 to 22² under authority of 35 U.S.C. § 134. The Board of Patent Appeals and Interferences (BPAI) has jurisdiction under 35 U.S.C. § 6(b).

¹ Application filed 9/28/01. Application is a continuation-in-part of 09/735,860 filed on 12/12/2000. The real party in interest is Direct TV Group, Inc. of Segundo, CA; Fox Entertainment Group; and the News Corporation.

Appellants' invented a method and system for distributing television signals using satellites, cell towers and stratospheric platforms. In the words of the Appellants:

In a further aspect of the invention, a method for operating a communication system comprises the steps of:

forming a plurality of multiple communication links directed to a communication infrastructure including at least two devices from the group including a cell tower, a first satellite constellation and a second satellite constellation, a stratospheric platform

dividing a communication into a plurality of datagrams;

routing the plurality of datagrams through the plurality of multiple communication links;

directing the datagrams from the said at least two devices to a gateway station; and

reassembling the datagrams into the communication.

Claim 1 is exemplary:

1. A television broadcasting system comprising:

a communication infrastructure;

a gateway station communicating a television signal to said communication infrastructure;

a user terminal establishing a plurality of multiple dynamic links corresponding to said communication infrastructure;

² Claim 9 has been indicated as being allowable if rewritten in independent form. (Final Rej. 14).

said gateway station generating a plurality of datagrams from said television signal and transmitting the multiple datagrams through said plurality of dynamic links; and

said user terminal receiving the plurality of datagrams from said infrastructure and reassembling the datagrams into the television signal.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Turcotte	US 5,754,139	May 19, 1998
Sklar	US 5,990,928	Nov. 23, 1999
Friedman	US 6,154,501	Nov. 28, 2000
Lazaris-Brunner	US 6,266,329 B1	Jul. 24, 2001
Kikinis	US 6,289,389 B1	Sep. 11, 2001
Hassan	US 6,301,231 B1	Oct. 9, 2001
Knoblach	US 2002/0072361 A1	Jun. 13, 2002
Nouri	US 6,484,213 B1	Nov. 19, 2002

Hub. Def. 2. Webster's II New College Dictionary. 1995.
Dynamic. Def. 2. Webster's II New College Dictionary. 1995.
Datagram. Microsoft Press Computer Dictionary, 3rd ed. 1997.
Hub. Microsoft Press Computer Dictionary, 3rd ed. 1997.
Router. Microsoft Press Computer Dictionary, 3rd ed. 1997.
Rejections:

Claims 1-4 and 18-20 stand anticipated under 35 U.S.C. § 102(b) over *Sklar* (5,990,928).

Claim 5 stands rejected under 35 U.S.C. § 103(a) over *Sklar* in view of *Hassan* (6,301,231).

Claim 6 stands rejected under 35 U.S.C. § 103(a) over *Sklar* in view of *Nouri* (6,484,213).

Claim 7 stands rejected under 35 U.S.C. § 103(a) over *Sklar* in view of *Nouri* in further view if *Hassan*.

Claim 8 stands rejected under 35 U.S.C. § 103(a) over *Sklar* in view of *Friedman* (6,154,501)

Claim 11 stands rejected under 35 U.S.C. § 103(a) over *Sklar* in view of *Kikinis* (6,289,389).

Claims 10, 12, and 13 stand rejected under 35 U.S.C. § 103(a) over *Sklar* in view of *Turcotte* (5,754,139).

Claims 14, 16, and 21 stand rejected under 35 U.S.C. § 103(a) over *Lazaris-Brunner* (6,266,329) in view of *Sklar*.

Claims 15, 17, and 22 stand rejected under 35 U.S.C. § 103(a) over *Lazaris-Brunner* in view of *Sklar* in further view of *Knoblach* (2002/0072361).

Appellants contend that the claimed subject matter is not anticipated by *Sklar*, or rendered obvious by *Sklar* in combination with the other references noted, for failure of the references to teach the claimed elements, which will be discussed more fully below. The Examiner contends that each of the nine groups of claims is properly rejected.

Rather than repeat the arguments of Appellants or the Examiner, we refer to the Briefs and the Answer for their respective details. Only those arguments actually made by Appellants have been considered in this decision. Arguments which Appellants could have made but chose not to

make in the Briefs have not been considered and are deemed to be waived.

*See 37 C.F.R. § 41.37(c)(1)(vii) (2004).*³

We affirm.

ISSUE

The issue is whether Appellants have shown that the Examiner erred in rejecting the claims under 35 U.S.C. § 102 and §103(a) as indicated above. Each of the rejections has been argued separately.

FINDINGS OF FACT

Findings with respect to the rejection of claims 1 to 4 and 18 to 20 under 35 U.S.C. § 102(b).

1. Appellants have invented a television distribution system using a plurality of antenna systems (satellites, stratospheric platforms and cellular towers) to distribute signals from a gateway station (#20, #21 in Figure 1). User terminals in either mobile (airplane, car, handheld) or fixed locations get continuous connection to the stream of signals from a combination of the antenna systems. (Spec, ¶ 0033 *ff*).

³ Appellants have not presented any substantive arguments directed separately to the patentability of the dependent claims or related claims in each group, except as will be noted in this opinion. In the absence of a separate argument with respect to those claims, they stand or fall with the representative independent claim. *See In re Young*, 927 F.2d 588, 590, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991).

2. The claims mention datagrams. (e.g. Claim 1). The specification relates: “As will be further described below, each user link has only a portion of the total signal to be received. These signal portions are referred to as datagrams in the present invention. Hub and router 76 receive various datagrams from the different user links [76 (sic)] and reassembles them.” (Specification, ¶ 0055). The Microsoft Press Computer Dictionary, Third Edition, (1997) defines datagram as “One packet, or unit, of information, along with relevant delivery information such as the destination address, that is sent through a packet-switching network.” (Answer, appendix).
3. The claims mention “a plurality of multiple dynamic links corresponding to said communication infrastructure” (e.g., Claim 1). In the specification, the Appellants assist our understanding of these terms as follows, “Each of the user links and feeder links may be multiple dynamic links meaning there are many which are subject to change as the users and infrastructure move in relation to each other.”

PRINCIPLES OF LAW

On appeal, Appellants bear the burden of showing that the Examiner has not established a legally sufficient basis for the rejection of the claims.

“In reviewing the [E]xaminer’s decision on appeal, the Board must necessarily weigh all of the evidence and argument.” *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

“To reject claims in an application under section 103, an examiner must show an unrebutted *prima facie* case of obviousness. … On appeal to the Board, an applicant can overcome a rejection by showing insufficient evidence of *prima facie* obviousness or by rebutting the *prima facie* case with evidence of secondary indicia of nonobviousness.” [citations removed] *In re Rouffet*, 149 F.3d 1350, 1355, 47 USPQ2d 1453, 1455 (Fed. Cir. 1998)

Both anticipation under 35 U.S.C. §102 and obviousness under §103 are two-step inquiries, in which the first step is a proper construction of the claims and the second step requires a comparison of the properly construed claim to the prior art. *Medichem S.A. v. Rolabo S.L.*, 353 F.3d 928, 933, 69 USPQ2d 1283, 1286 (Fed. Cir. 2003). –

Our reviewing court states in *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) that “claims must be interpreted as broadly as their terms reasonably allow.” Our reviewing court further states that "the words of a claim are generally given their ordinary and customary meaning." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312, 75 USPQ2d 1321, 1326 (Fed. Cir. 2005) (en banc) (citations omitted). The "ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." (*Id.* at 1313, 75 USPQ2d at 1326).

ANALYSIS

Rejection of Claims 1-4 and 18-20 over Sklar

Appellants contend that Examiner erred in rejecting claims 1 to 4 and 18 to 20 under 35 U.S.C. § 102(b). Reviewing the Findings of Facts cited above and the documents of record, we find that the Examiner has properly made a *prima facie* case for the anticipation of the noted claims by Sklar. (See *In re Rouffet* cited above.) In challenge to that case, Appellants raise a number of issues. First, Appellants contend that Sklar contains no teaching of a plurality of dynamic links (Br. 7), and that “changing from one beam to another does not make the beams themselves dynamic.” In considering this argument, we notice that the claim language is addressed to the “dynamic links corresponding …” not the argued “dynamic beams”. Considering the definition of dynamic links taken from the Specification itself (see Finding of Fact #3 above) we note that the links in Sklar are indeed “subject to change as the users and infrastructure move in relation to each other”. Certainly the airplane in Sklar is moving with respect to the two gateway sources #12 and #18. (Sklar, Figure 1). Appellants further argue that the TV broadcast beam in Sklar is not divided using multiple datagrams through a plurality of dynamic links. We find that datagrams, as understood by general meaning and by usage in the Specification, can include as few as a single packet in a digital signal. (FF. 2). Clearly Sklar teaches the gateway station generating a plurality of datagrams. (Sklar, Col.1, ll. 38).

Claim 2 falls with claim 1. (Br. 7).

Claim 3 requires that satellites of the communication infrastructure comprise satellites from two constellations. Appellants argue that this limitation is not shown in Sklar. (Br. 14). Appellants acknowledge Examiner's observation that Sklar mentions different constellations of satellites. (Reply Br. 2.) However, Appellants argue that the satellites may be from only one constellation. We find the mention of the satellites of different constellations in Sklar (see especially Column 13, middle) sufficient to anticipate the claim as multiple satellites are used in Sklar without limitation concerning the respective constellation of the satellites.

Claim 4 falls with claim 1. (Br. 7).

Claim 18 presents the same arguments as Claim 1, which we found anticipated by Sklar. (Br. 8).

Claim 19 requires a second plurality of datagrams, a second plurality of dynamic communication links, and reassembling the second plurality of datagrams into the communication at the user terminal. Examiner in his Answer presents the two pluralities of datagrams and communication links (Answer 14-15) based on the two signal sources in Sklar. We do not find error in his application of the art.

Claim 20 requires the plurality of dynamic links, multiple datagrams, and a choice of two devices of the infrastructure from those listed. Considering the remarks above with respect to claims 1 and 3, we do not find error in the rejection of this claim.

Rejection of Claim 5 over Sklar in view of Hassan

Appellants contend that Examiner erred in rejecting claim 5 under 35 U.S.C. § 103(a). Specifically, Appellants contend that Hassan does not specifically describe that the varying data rates correspond to the plurality of dynamic links. We find that Hassan teaches that the satellites and terminals each communicate using a variety of data rates (Hassan, Col. 6, ll. 62), and this teaching is reasonably combinable with Sklar. In view of this teaching, claim 5 is rendered obvious as rejected.

Rejection of Claim 6 over Sklar in view of Nouri

Appellants contend that Examiner erred in rejecting claim 6 under 35 U.S.C. § 103(a). Nouri teaches the claimed router in an application for signal processing. Appellants have pointed out omissions in the Nouri reference that were clearly recited by the Examiner to be in the Sklar reference, which is part of this rejection. As the “omitted” elements were pointed out with respect to claim 1, we do not find error in the rejection of this claim.

Rejection of Claim 7 over Sklar in view of Nouri and Hassan

With respect to the rejection of Claim 7 under 35 U.S.C. §103(a) over Sklar in view of Nouri in further view of Hassan, Appellants repeat the argument concerning datagrams and plurality of dynamic links discussed with respect to Claim 1. We do not find error with this rejection.

Rejection of Claim 8 over Sklar in view of Friedman

With respect to the rejection of Claim 8 under 35 U.S.C. § 103(a) over Sklar in view of Friedman, we note in Friedman a multiple beam antenna used for communication with satellites. Appellants argue that the Friedman antenna beams “appear to teach one signal.” (Br. 9). The claim requires a plurality of dynamic links, not signals. Sklar fully teaches that limitation. (See remarks on Claim 1 above.). We find no error in this rejection.

Rejection of Claim 11 over Sklar in view of Kikinis

With respect to the rejection of Claim 11 under 35 U.S.C. § 103(a) over Sklar in view of Kikinis, Appellants argue that Kikinis has nothing to do with broadcasting television signals over a communications system. (Br. 9). We accept the argument of the Examiner (Answer 17) that Sklar provides the “omitted teachings” as covered in the discussion of Claim 1. As we consider the teachings of both references in a rejection under 35 U.S.C. § 103, we do not find error in the rejection.

Rejection of Claims 10, 12, and 13 over Sklar in view of Turcotte

With respect to the rejection of Claims 10, 12, and 13 under 35 U.S.C. § 103(a) over Sklar in view of Turcotte, in viewing the latter reference we find that Digital Signal Processor (#99) routes single signals to and from the multiple connections to Digital Beam Former (#95). (Col. 6, ll. 35). Thus the digital signal processor is programmed to perform the functions of a hub and router, as claimed. We do not find error with Examiner’s argument, as

indicated in the Answer, page 18 The Appellants argue that the claimed platform state vector and user state vector are used to generate the relative position vectors with respect to the satellite or other device and the user. (Br. 20). We find that Sklar addresses the same problem of satellite location with coordinates using pedestal azimuth and pedestal elevation calculations (Col. 8, ll. 55). Examiner considers the claims obvious over this teaching, and we do not find error in that judgment.

Rejection of Claims 14, 16, and 21 over Lazaris-Brunner and Sklar

With respect to the rejection of Claims 14, 16, and 21 under 35 U.S.C. § 103(a) over Lazaris-Brunner and Sklar, Appellants argue that the plurality of dynamic links is not taught in Sklar. As we discussed above in connection with Claim 1, we find the teaching of dynamic links present in Sklar.

With respect to Claim 16, Appellants argue that the teaching of national and local feeds is not taught in the references. We must find that Appellants are in error, as we agree with the Examiner that Lazaris-Brunner strongly suggests the recited feeds in column 4, line 18 and column 6, line 48 (Answer 21). Lazaris-Brunner also discloses multiple signals being transmitted on the plurality of links which, when combined with Sklar's teaching of dynamic links, renders Claim 21 obvious. We thus find that the Examiner has not erred in this rejection.

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*Rejection of Claims 15, 17, and 22 over Lazaris-Brunner,
Sklar, and Knoblach*

With respect to the rejection of Claims 15, 17, and 22 under 35 U.S.C. § 103(a) over Lazaris-Brunner in view of Sklar in further view of Knoblach, Appellants argue the same omissions exist as they expressed for Claims 14 and 21. (Br. 12). For the reasons these arguments were not found persuasive above, we do not find error in this rejection of claims 15, 17, and 22.

CONCLUSION OF LAW

Based on the findings of facts and analysis above, we conclude that the Examiner did not err in rejecting claims 1 to 8 and 10 to 22.

DECISION

The Examiner's rejection of claims 1 to 8 and 10 to 22 is affirmed.

AFFIRMED

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